

**Jaguar Conservation Team (JAGCT) Summary Notes**  
Douglas City Hall, Douglas, Arizona  
January 31, 2002

Meeting was called to order by Bill Van Pelt, Arizona Game and Fish Department (AGFD), at 09:15 MDT.

A. Opening Comments and Ground Rules

Ground rules were the same as previous meetings. Bill Van Pelt asked that participants raise their hand to ask a question or state an opinion and that only one person speak at a time, with no side conversations, so that each person could be heard and the meeting could move forward. Participants in the Jaguar Working Group (JAGWG; i.e., everyone present at the meeting) were allowed to comment and were encouraged to do so on any issue discussed during the meeting.

*Handouts Available*

1. Meeting Agenda
2. Summary notes from July 28, 2001 meeting in Animas, New Mexico
3. Compensation criteria and values for livestock depredated by jaguars
4. *Characterizing and mapping potential jaguar habitat in Arizona*
5. *Developing a model to help evaluate the relative suitability of potential jaguar habitat in New Mexico*
6. Abbreviated (7-day) version of the jaguar education unit (available to Working Group members who intend to comment on the material)

B. Review of Agenda and Previous Meeting Notes; Additional Discussion Items

1. Addition to agenda: update on activities in Mexico.
2. Scotty Johnson, Defenders of Wildlife, asked whether anyone has requested INS's 10-year development plan. Bill Van Pelt said that he would look into the availability of the plan.
3. Correction to July 2001 meeting notes under section Legal Protection of the Jaguar in Arizona and New Mexico- New Mexico legislators convening only in Jan/Feb, not until Jan/Feb.

C. Status of Previous Action Items

1. Action Item #1: Agency representatives will check with their respective agencies and determine if funds are available to help defray costs of printing additional copies of the Jaguar Sighting Brochure. Defenders of Wildlife has contributed money for the printing of additional brochures. Bureau of Land Management and the USDA Forest Service has also expressed interest in providing additional funds. The current goal is to print 25,000 brochures.

2. Action Item #2: Habitat subcommittee members were to provide comments on the report *Characterizing and Mapping Potential Jaguar Habitat in Arizona* by September 4, 2001. AGFD has received comments from three people/organizations: Alan Rabinowitz, Wildlife Conservation Society; Michael Robinson, Center for Biological Diversity; and Defenders of Wildlife. A black-and-white copy of the most recent version of the report (July 2001) is available to all JAGWG members. When a revised copy is finished (see Habitat Identification- Arizona), AGFD will mail a hard copy, with comments inserted, to the habitat subcommittee for review.
3. Action Item #3: Provide comments regarding the housing and storing of educational kits in the rural communities and the suggested contact person for checking out the kits. The education subcommittee is still looking for suggestions. Please send suggestions via postal mail to Karen Schedler at 2221 W. Greenway Rd., Phoenix, AZ 85023 or e-mail to [kschedler@gf.state.az.us](mailto:kschedler@gf.state.az.us) or Karen Husted at [kkhusted@vtc.net](mailto:kkhusted@vtc.net).
4. Action Item #4: An AGFD representative of the JAGCT will write a thank you letter to the National Fish and Wildlife Foundation for their monetary assistance in finalizing the jaguar curriculum. Bill Van Pelt, AGFD, wrote a thank you letter to NFWF for their monetary contribution toward completion of the education packet and translation of the educational materials into Spanish.
5. Action Item #5: Don Cullum will send a report from Raul Valdez to Bill Van Pelt for distribution to the JAGCT. Don has not received the report from Raul Valdez, but he will try to meet with Raul and get a copy of the report.
6. Action Item #6: Sarah Rinkevich, USFWS, will distribute information on the Service's Applicant Status Criteria. Sarah will check into this for the next JAGCT meeting.

D. Update on New Mexico and Arizona Jaguar Sightings

*New Mexico*- No jaguar sightings in the last six months.

*Arizona*- Jack Childs showed a photograph of an adult, male jaguar photographed by remote camera approximately 5 miles north of the Mexican border on December 9, 2001 at 9:23 p.m. The animal appears healthy and according to Howard Quigley, Hornocker Wildlife Institute and Scientific Advisory Group member, is probably not a formerly captive animal. This belief was based upon no evidence of pad wear or calluses on the legs from a animal pacing or lounging in captivity. This jaguar is a different individual from either of the two jaguars sighted in 1996. A distinct color pattern on the inside of the leg and tail helps distinguish individual jaguars. Jack showed the recent photograph to Carlos Lopez and he did not recognize this particular jaguar as one from his study population in Mexico.

Jack reviewed the history of his camera work along the Mexican border. He put four cameras in the Baboquivari and Peloncillo mountains in 1997. He received a grant from the Wildlife Conservation Society to put six additional cameras in the Arizona-Mexico borderlands in March of 2001, and he monitors the cameras approximately every six weeks. Jack searches for evidence

of large cat (i.e., mountain lion) sign to determine where he will locate cameras. These cameras are heat and motion sensitive; he applies Canine Call bait near the camera to attract cats. He has over 500 photos from his efforts; gray fox is one of the most common animals caught on film.

Jack also has hair snares, baited with Canine Call, in the borderland mountain ranges. Eventually, he will send hair samples to a lab for genetic analysis. If jaguar hair is found, it will be compared to samples from Mexican populations to determine the origin of the individual. Paul Beier, Northern Arizona University, is experimenting with different baits that will be more specific to cats and will attract fewer gray foxes.

Members of the JAGWG asked if this could be a resident jaguar or if not, if it ventures north of the Mexican border more frequently than we know. We have no way of knowing where the photographed jaguar is now and if it has been in Arizona previously. Jack has been monitoring this camera for approximately 9 months and this is the first photo documentation of a jaguar.

Discussion turned to the upcoming press release and the opportunity to re-educate the public regarding the jaguar and the JAGCT's efforts. We need to stress to the public that 1) the jaguar is federally listed as Endangered and is fully protected by both the federal and state government (the combined federal and state fine for illegal take of a jaguar is \$200,000); and 2) the Malpai Borderlands Group has established a compensation fund for ranchers that lose livestock to a jaguar (provided there is physical evidence that it is a jaguar kill).

The JAGWG asked what measures AGFD is taking to protect this particular jaguar. The Department notified all Wildlife Managers whose district is near the sighting to be on alert and to inform local ranchers of the jaguar compensation fund. Steve Pavlik, Sky Island Alliance, suggested increasing the presence of law enforcement officers in the area. Because we do not know where the cat presently is, this may or may not be effective. Outreach and public education is key to protecting the jaguar.

Several members of the JAGWG suggested that the Department close lion hunting in the area to help protect the jaguar and to prevent it from being accidentally treed by hounds. However, closing the area to hunting when we have no idea of the animal's present location is not a viable solution. We need to limit unnecessary punitive actions on people that could only serve to increase public anxiety and contention regarding the jaguar. Lion hunting in Arizona is likely not detrimental to jaguars. The Department will contact local houndsmen near the sighting location; they can be invaluable in helping with the jaguar conservation effort. Bill Van Pelt reiterated that it is against the law to pursue an Endangered Species and houndsmen are required to back their dogs off as soon as they realize that they are in pursuit of a jaguar. The Arizona Houndsmen has offered a reward for information on the illegal take of jaguars; information on this reward is in the AGFD hunting regulations.

To date, AGFD has not contacted individual permittees near the jaguar sighting to discuss the livestock depredation fund established by the Malpai Borderlands Group. Defenders of Wildlife hopes to establish a similar fund that can be used if the Malpai Group's funds run out. The primary concern of ranchers and landowners is not the jaguar itself, as numbers north of the Mexican border are very low and do not pose a threat to the livelihood of ranchers; however,

they are concerned about restrictions that could arise if the USFWS declares critical habitat for the jaguar. **Action Item: the Malpai Borderlands Group will work with the Forest Service to draft and send a letter to permittees within the Coronado National Forest to raise awareness of the compensation fund.**

Scotty Johnson suggested that the JAGWG get INS involved in the conservation effort. Border Patrol agents can serve as additional eyes and ears for the JAGWG without taking away from their primary duties. Border Patrol agents have reported cat sightings to Jack Childs in the past and Jack investigates all promising reports. Don Cullum, New Mexico Cattle Grower's Association, stressed the importance of landowner support and again suggested signs to display at gates and mailboxes (e.g., *This Ranch Supports Jaguar-friendly Conservation Practices During Our Daily Operations*).

The JAGCT hopes to install more cameras in the area where the jaguar was photographed and check these cameras more frequently. If another jaguar is caught on film, a capture team will be assembled if it is logistically possible to capture and collar the animal so that we can study movement and habitat use. Members of the JAGWG expressed concern regarding the animal's safety: could hackers determine the frequency of the animal's transmitter, track its movements, and perhaps kill it. AGFD will likely purchase a satellite collar to use on a jaguar; these collars can be programmed to turn on and off at specific times and can last up to 9 years. In this case, the transmitter can be turned on briefly to obtain a location reading and turned off immediately afterwards; this would make it extremely difficult for a hacker to locate the jaguar.

AGFD is also in the process of printing and distributing more brochures *What to do if you see a Jaguar*. The Department will make sure that INS receives copies of this brochure.

*Public Outreach.* Scotty Johnson suggested that the JAGCT adopt a long-term strategy for public education and outreach and that a JAGCT Outreach Subcommittee be formed, which he would be willing to chair. Other JAGWG members who volunteered to serve on the subcommittee were Steve Pavlik, Sarah Rinkevich, Don Cullum, Janice Przybyl, and Levi Klump. Other interested parties should contact Scotty Johnson ([sjohnson@albq.defenders.org](mailto:sjohnson@albq.defenders.org)). Wendy Glenn, Malpai Borderlands Group, will help distribute information generated by the subcommittee but will not actively participate on the subcommittee. Suggestions for outreach included holding public meetings in rural, borderland communities. JAGWG members asked if there was funding available for outreach efforts. **Action Item: Bill Van Pelt will ascertain if there is money available for outreach activities through AGFD and Sarah Rinkevich will do the same at USFWS.** Howard Quigley mentioned that the Hornocker Wildlife Institute might have money available for small grants.

*Additional Arizona Sightings.* Tim Snow, AGFD, has received 7 sighting reports in the last 6 months: 6 of these were black cat sightings. A black cat was reported close to where the jaguar was photographed. There were no field investigations of jaguar sightings during the last 6 months. AGFD personnel and Jack Childs investigate all sightings that are reported in a timely manner, but most sightings are reported long after the fact and the likelihood of finding jaguar sign is extremely low.

#### E. Kill Verification Activities.

There have been no suspected jaguar depredations reported in Arizona or New Mexico over the last 6 months.

#### F. Habitat Identification

*Arizona.* Bill Van Pelt reported that Jim Hatten, GIS Senior Analyst for AGFD Nongame Branch, left the agency in January 2002. Jim was unable to make necessary changes to the maps and finalize the draft report before he left. He will be making these changes in the near future and the report will be re-sent to the habitat subcommittee for review. We will not incorporate the new jaguar sighting into the model at this point- we will use it to assess model fit.

*New Mexico.* New Mexico Department of Game and Fish (NMDGF) contracted with the Earth Data Analysis Center of the University of New Mexico to model potential jaguar habitat in the state. Chuck Hayes, NMDGF, distributed the handout *Developing a model to help evaluate the relative suitability of potential jaguar habitat in New Mexico*. New Mexico took a different approach to the modeling effort than Arizona. New Mexico looked at a combination of habitat variables (listed below) to determine relative suitability of areas within New Mexico for jaguars. Arizona determined thresholds of suitability for each criterion. Note that not all class I sightings are included in the New Mexico map.

Variables used in New Mexico's analysis of potential habitat were terrain ruggedness, prey distribution, road density, proximity to water, and the presence of Madrean evergreen woodland community. New Mexico's analysis differed from Arizona's in the following manner:

1. *Terrain Ruggedness:* the same parameters were used for the New Mexico and Arizona analyses except NM compared the elevation in each cell to the neighboring 8 rather than 4 cells.
2. *Prey Species:* New Mexico looked at the distribution of 5 prey species (elk, mule deer, white-tailed deer, javelina, and coati) for their model. Arizona did not examine the distribution of jaguar prey because the JAGSAG believed it to be too restrictive of a criterion.
3. *Human Density Patterns.* Both New Mexico and Arizona excluded a direct examination of human-density patterns obtained from census data. New Mexico used road density as an index of human populations, and Arizona excluded urban and high-density rural areas and agricultural areas from analyses.
4. *Distance to Water.* New Mexico included areas within 16 km from streams and lakes and 1 km from springs as potential jaguar habitat, and weighted perennial waters over intermittent waters. Arizona included areas within 10 km of perennial/intermittent creeks or rivers and 5 km of springs as potential jaguar habitat.

5. *Vegetation Associations.* New Mexico only examined the relationship between jaguar sightings and the Madrean evergreen woodland community (based on NM-GAP) due to the low number of jaguar occurrence records. Arizona examined the relative frequency of jaguar sightings in different biomes and vegetation series based on AZ-GAP covers.

The New Mexico analyses are still pending completion. NMDGF will continue to evaluate the criteria used to generate this model of potential jaguar habitat, decide how to weight the variables with respect to each other, and examine connectivity, especially with potential corridors from Mexico. **Action Item: Send comments on the New Mexico jaguar habitat model to Chuck Hayes at [clhayes@state.nm.us](mailto:clhayes@state.nm.us) or 505-476-8101 by the end of February 2002.**

#### G. Education.

The education subcommittee received comments on the jaguar education unit. While reviewers expressed that the unit is well-thought out and comprehensive, it is too intensive for teachers to use in the school systems right now. Integrated curriculums, such as the jaguar unit, are not in use by local school systems yet, but should be within a few years. Meantime, the education subcommittee has shortened the jaguar program into a 7-day unit. This shortened version is still in draft form and was available at the meeting for JAGWG members to review. The education subcommittee plans to begin field-testing the unit by March 1, 2002. **Action Item: Send comments on 7-day jaguar unit to Karen Husted at [kkhusted@vtc.net](mailto:kkhusted@vtc.net) or Karen Schedler at [kschedler@gf.state.az.us](mailto:kschedler@gf.state.az.us) by February 15, 2002.**

The education subcommittee is also assembling resource trunks (10-20) that will contain replicates of cat skulls, books, articles, and the jaguar-sighting brochure. The subcommittee is still looking for natural history books of southwestern cats geared toward 5<sup>th</sup> – 8<sup>th</sup> graders and a book of folklore that contains references to the jaguar. Additionally, Karen Husted is seeking advice on how to search out grant money that may be available for innovative and creative projects such as the JAGCT education unit. **Action Item: Send suggestions for additional trunk materials (books), local communities and places to store the resource trunks, and funding sources to Karen Husted at [kkhusted@vtc.net](mailto:kkhusted@vtc.net).**

#### H. Legal Protection

*New Mexico.* The state penalty for killing a jaguar is still below federal penalty levels. Chuck Hayes stated that the New Mexico legislature is presently dealing with state budget issues and has no plans of addressing the status of legal protection for the jaguar in the next legislative session.

#### I. End-of-Year Report.

The end-of-year report on JAGCT activities is due to the USFWS by the end of April 2002. Last year's report was never finalized; therefore, this report will cover activities from June 2000 – March 2002.

#### J. Update on Jaguar Activities in Mexico.

Carlos Lopez Gonzalez has initiated snaring attempts in his study area in Mexico with the intent of collaring jaguars. He snared one jaguar, but it pulled out.

Howard Quigley mentioned that funds are available for range-wide jaguar conservation efforts, such as Jack's camera work on the border and New Mexico State University's work on population dynamics and viability of jaguars in Mexico. He has a protocol for capturing and collaring jaguars and is willing to help us out as needed.

#### K. Publications

A book generated from the 1999 Wildlife Conservation Society's workshop *Jaguars in the New Millennium* should be available in approximately 3 months. The book will be in Spanish with an English summary; an English electronic version may be available as well.

*Additional Business:*

*New Jaguar Publication Available.* *Borderland Jaguars/Tigres de la Frontera* by David E. Brown and Carlos A. Lopez Gonzalez is available for \$11.96 from [www.amazon.com](http://www.amazon.com).

*Southwest Carnivore Conference.* Aimee Roberson, USFWS, informed the Working Group that the second annual Southwest Carnivore Conference will be held this year in Grand Canyon National Park from May 14-15, 2002.

#### L. Livestock Depredation Fund.

Wendy Glenn asked for input from the JAGWG on current market value of livestock. The following is a revision of payout amounts based on this discussion:

The suggested values for 2002 are as follows:

Calf:	\$ 400.00
Yearling:	\$ 650.00
Cow:	\$ 800.00
Colt:	\$1500.00
Adult Horse:	\$2500.00
Sheep:	\$ 200.00
Goat:	\$ 200.00

#### M. Future Meetings.

The next meeting of the JAGCT/JAGWG will be on **July 18, 2002** at 10:00 Mountain Daylight Time in Animas, New Mexico. Please note the change in the meeting date from what was discussed at the meeting.

The meeting adjourned at 12:15 MDT.

Attendance Roster

Leif Abrell	Biosphere 2 Center, Chemistry
Annalaura Averill-Murray	Arizona Game and Fish Department
Jack Barnitz	Bureau of Land Management, NM
Paul Barrett	US Fish and Wildlife Service, AFSO
David Bergman	USDA/APHIS/Wildlife Services
Ben Brown	Gray Ranch, NM
Anna Childs	Private Citizen
Jack Childs	Private Citizen
Matt Colvin	Private Citizen
Alex Conley	University of Arizona
Don Cullum	New Mexico Cattle Grower's Association
Jim Gacey	Bureau of Land Management
Santiago Gonzalez	US Fish and Wildlife Service- NM
Warner Glenn	Malpai Ranch
Wendy Glenn	Malpai Ranch
Bill Grossi	Bureau of Land Management
Kevin Hansen	Private Citizen
Chuck Hayes	New Mexico Department of Game and Fish
Gary Helbing	USDA, Forest Service
Karen Kay Husted	Private Citizen
Scotty Johnson	Defenders of Wildlife
Judy Keeler	Boothill Heritage Association
Levi Klump	Landowner
Sue Krentz	Arizona Cattle Grower's Association
Anna Magoffin	Rancher- Malpai
Alan May	USDA/APHIS/Wildlife Services
Ted McRae	Bureau of Land Management
JR Murdock	USDA/APHIS/Wildlife Services
Steve Pavlik	Sky Island Alliance
Janice Przybyl	Sky Island Alliance
Howard Quigley	Hornocker Wildlife Institute
Bill Radke	US Fish and Wildlife Service- Douglas, AZ
Sarah Rinkevich	US Fish and Wildlife Service
Aimee Roberson	US Fish and Wildlife Service, NMESFO
Karen Schedler	Arizona Game and Fish Dept.
Matt Skroch	Sky Island Alliance
Tim Snow	Arizona Game and Fish Department
Bill Van Pelt	Arizona Game and Fish Department
Stephen Williams	AZ State Land Dept.